

Claims 1-33 are pending in this application, with Claims 1, 12, 13, and 24 being independent.

Claims 1, 7-13, and 19-33 were rejected under 35 U.S.C. 103 (a) as being unpatentable over EP0840513A2 (Cox '513) and the article "Capacity of the watermark channel: how many bits can be hidden within a digital image?" (Barni et al.). Claims 2-6 and 14-18 were rejected under 35 U.S.C. 103(a) as being unpatentable over Cox '513 and EP0766468A2 (Cox '468) and Barni et al. Applicants respectfully traverse these rejections for the reasons discussed below.

The present invention recited in independent Claim 1 is directed to a method of inserting a message in a subset of digital data. As recited in that claim, the present invention includes, *inter alia*, the features of (i) estimating a capacity of the subset of digital data to receive a message and (2) selecting, based on a size of the message compared to the estimated capacity, and from a set of messages representing a same message with each having a different number of bits, a message having a size less than or equal to the estimated capacity. In other words, there is a set of messages representing the same message using a different number of bits, for example, a watermark represented with different resolutions. One of those messages is selected based on a comparison of the size of the message with an estimated capacity of a subset of digital data to receive a message. Accordingly, the message (e.g., watermark) is selected that best fits the digital data into which it is to be inserted. Applicants submit that the cited art fails to disclose or suggest these features.

The Office Action concedes (see page 3) that Cox '513 does not disclose or suggest at least the features of Claim 1 newly added in the Amendment filed September 12,

2006. In particular, Applicants submit that Cox '513 does not disclose selecting a message from a set of messages representing a same message each having a different number of bits, or performing the selection based on a size of the message compared to an estimated capacity of a subset of digital data.

Applicants submit that the other cited art also fails to disclose or suggest at least the above-mentioned features, and that cited art fails to remedy the above-mentioned deficiencies of Cox '513. The Barni et al. article discloses a method to calculate the number of bits that can be hidden within an image by frequency domain watermarking (i.e., by modifying the DCT or DFT coefficients), assuming various theoretical distribution models for frequency domain coefficients. Thus, that article discloses a method for estimating the maximum number of bits that can be hidden in an image, and it appears to relate to the claimed step of estimating a capacity to receive a message for a subset of digital data.

However, Applicants submit that nothing in the Barni et al. articles discloses or suggests selecting a message from a set of messages representing a same message with each having a different number of bits. Further, Applicants submit that nothing in that article discloses or suggests selecting a message based on a comparison of the size of the message to the estimated capacity of the subset of digital data. That article merely discloses a theoretical approach to determining the maximum capacity of bits to be hidden in data, without a suggestion that the estimated capacity be used to select a message from a set of messages representing the same message with a different number of bits.

The Cox '468 patent also fails to disclose or suggest at least the above-mentioned features.


Accordingly, Applicants submit that the present invention recited in independent Claim 1 is patentable over the art of record.

The other independent claims include features that are similar to the above-discussed features of Claim 1 and are believed patentable for reasons similar to Claim 1. The dependent claims are believed patentable for at least the same reasons as the independent claims, as well as for the additional features they recite.

For the foregoing reasons, this application is believed to be in condition for allowance. Favorable reconsideration, withdrawal of the outstanding rejections, and an early Notice of Allowance are requested.

Applicants' undersigned attorney may be reached in our Washington, DC office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



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